FIG. 1
(Prior Art)

100

```
<?xml version="1.0" ?>

<xsd:schema xmlns:xsd="http://www.w3.org/2001/XMLSchema">

<!-- ************************************************** -->
<!-- The root element defines a person.                -->
<!-- ************************************************** -->

110  <xsd:element name="person" type="personType"/>

     <xsd:complexType name="personType" mixed="false">
       <xsd:all>
         <xsd:element name="name" type="xsd:string" minOccurs="1" maxOccurs="1" />       130
         <xsd:element name="address" type="xsd:string" minOccurs="1" maxOccurs="1" />    140
       </xsd:all>
       <xsd:attribute name="height" type="xsd:integer" use="optional" />     150
       <xsd:attribute name="weight" type="xsd:integer" use="optional" />     160
     </xsd:complexType>
</xsd:schema>
```
120

FIG. 2 (Prior Art)

200

```
<?xml version="1.0" encoding="UTF-8"?>
<person
    xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
    xsi:schemaLocation="http://www.myCompany.com/base.xsd"      220
    height=72 weight=190>
    <name>John</name>
    <address>123 Main Street</address>
</person>
```
210

FIG. 3A
(Prior Art)

```
300

<?xml version="1.0"?>

<xsd:schema xmlns:xsd="http://www.w3.org/2001/XMLSchema">

<!-- ****************************************************** -->
<!-- This extension adds gender to a person. -->
<!-- ****************************************************** -->

310  <xsd:redefine schemaLocation="base.xsd">
                                              311

    <xsd:complexType name="personType">
                                        321
        <xsd:complexContent>
            <xsd:extension base="personType">
                                            322
                <xsd:attribute name="gender" type="xsd:string" use="optional" />
                                                                              323
            </xsd:extension>
        </xsd:complexContent>
    </xsd:complexType>
  </xsd:redefine>

320

</xsd:schema>
```

FIG. 3B
(Prior Art)

__330__

```
<?xml version="1.0" ?>

<xsd:schema xmlns:xsd="http://www.w3.org/2001/XMLSchema">

<!-- ************************************************************* -->
<!-- This extension adds age to a person. -->
<!-- ************************************************************* -->

340 <xsd:redefine schemaLocation="base.xsd">

     <xsd:complexType name="personType">  351
       <xsd:complexContent>
         <xsd:extension base="personType">  352
           <xsd:attribute name="age" type="xsd:integer" use="optional" />  353
         </xsd:extension>
       </xsd:complexContent>
     </xsd:complexType>
   </xsd:redefine>
</xsd:schema>
```

350

FIG. 3C
(Prior Art)

```
360

<?xml version="1.0" ?>

<xsd:schema xmlns:xsd="http://www.w3.org/2001/XMLSchema">

<!-- ******************************************* -->
<!-- This extension adds marital status to a person. -->
<!-- ******************************************* -->

370  <xsd:redefine schemaLocation="base.xsd">

     <xsd:complexType name="personType">  381
        <xsd:complexContent>
           <xsd:extension base="personType">  382
              <xsd:attribute name="maritalStatus" type="xsd:string" use="optional" />  383
           </xsd:extension>
        </xsd:complexContent>
     </xsd:complexType>
     </xsd:redefine>
380

</xsd:schema>
```

FIG. 4A (Prior Art)

400

```
<?xml version="1.0" encoding="UTF-8"?>
<person
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xsi:schemaLocation="//www.myCompany.com/ext1.xsd"
height="72" weight="190" gender="M">
    <name>John</name>
    <address>123 Main Street</address>
</person>
```

410

FIG. 4B (Prior Art)

430

```
<?xml version="1.0" encoding="UTF-8"?>
<person
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xsi:schemaLocation="//www.myCompany.com/ext2.xsd"
height="72" weight="190" age="35">
    <name>John</name>
    <address>123 Main Street</address>
</person>
```

440

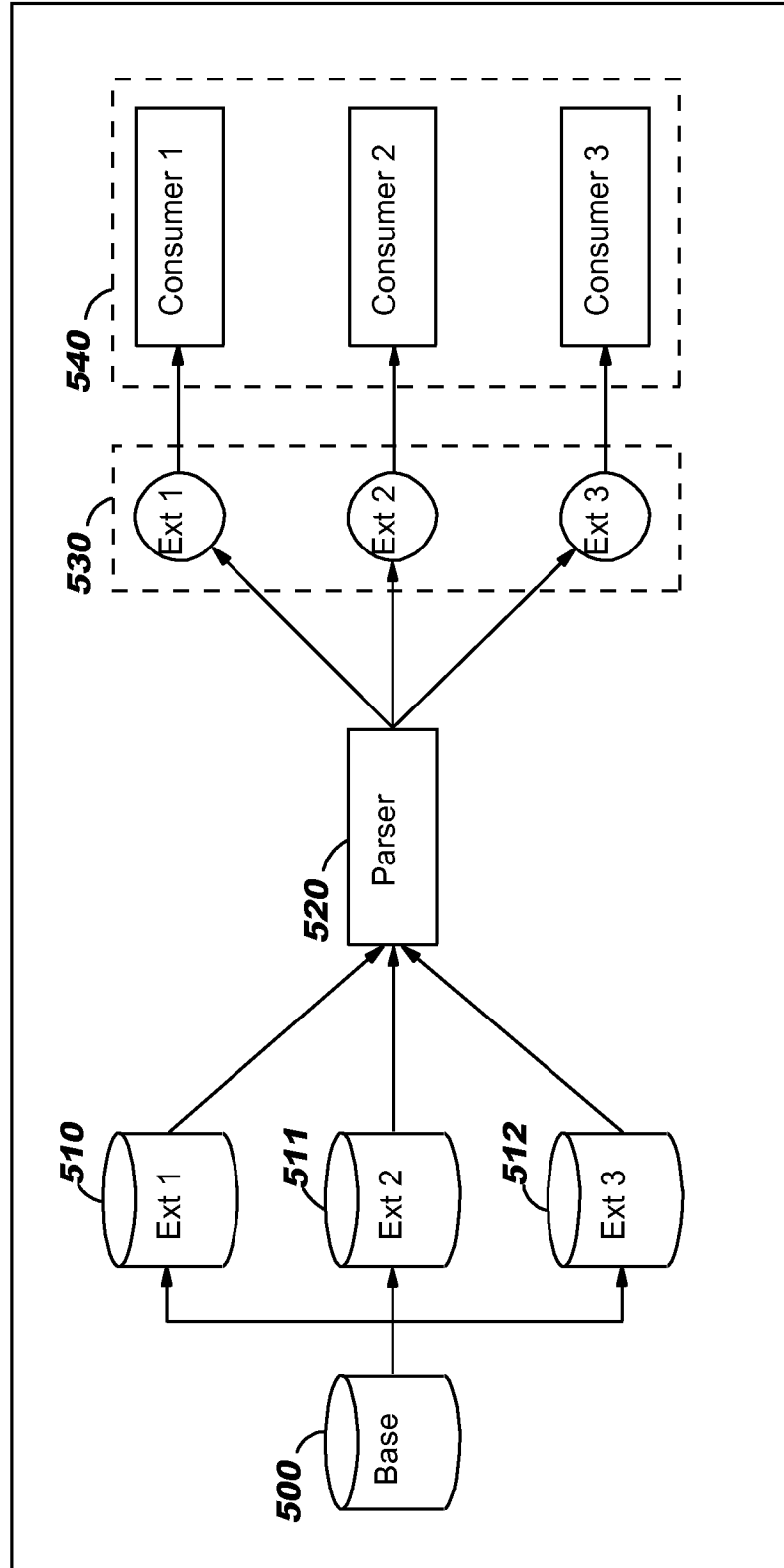## FIG. 4C (Prior Art)

460

```
<?xml version="1.0" encoding="UTF-8"?>
<person
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xsi:schemaLocation="//www.myCompany.com/ext3.xsd"
height="72" weight="190" maritalStatus="Single">
    <name>John</name>
    <address>123 Main Street</address>
</person>
```

470

FIG. 5
(Prior Art)

FIG. 6
(Prior Art)

600

```
<?xml version="1.0" ?>

<xsd:schema xmlns:xsd="http://www.w3.org/2001/XMLSchema">

<!-- ******************************************************************************** -->
<!-- The root element defines a person.                                                  -->
<!-- ******************************************************************************** -->

<xsd:element name="person" type="person/Type"/>

<xsd:complexType name="personType" mixed="false">
    <xsd:all>
        <xsd:element name="name" type="xsd:string" minOccurs="1" maxOccurs="1" />
        <xsd:element name="address" type="xsd:string" minOccurs="1" maxOccurs="1" />
    </xsd:all>
    <xsd:attribute name="height" type="xsd:integer" use="optional" />
    <xsd:attribute name="weight" type="xsd:integer" use="optional" />
    <xsd:attribute name="gender" type="xsd:string" use="optional" />
    <xsd:attribute name="age" type="xsd:integer" use="optional" />
    <xsd:attribute name="maritalStatus" type="xsd:string" use="optional" />
</xsd:complexType>
</xsd:schema>
```

FIG. 7
(Prior Art)

700

```
<?xml version="1.0" encoding="UTF-8"?>
<person
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xsi:schemaLocation="//www.myCompany.com/ext3.xsd"
  height="72" weight="190" gender="M" age="35"
  maritalStatus="Single">
    <name>John</name>
    <address>123 Main Street</address>
</person>
```

FIG. 8
(Prior Art)

800

Base → Ext 1 → Ext 2 → Ext 3 → Parser